EDUCATOR-INDUSTRY COOPERATION: Is it Possible?

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During the past several years the Los Angeles Department of Water and Power has been making an honest effort to cooperate with the Los Angeles City schools to provide factual and relevant material about water supplies and water quality as well as information about power generation.

This cooperation was provided even before the public and the schools were aware of an energy crisis.

Our initial efforts in this direction were with the Monlux Science Center, which was and still is an interesting experiment in elementary education drawing support from industry.

This center is under the immediate supervision of a very innovative educator by the name of Ralph Turner.

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Mr. Seymour Sitkoff, who happens to be the arrangements coordinator for this convention, UNIVERSITY OF CALLEDRINA portant part in the success of Monlux by virtue of his responsibility for developing science programs for Monlux as well as other areas in the schools.

This initial step with Monlux was followed by our discovery of a small, federally-funded office in the schools called the Laurel Ecology Center, which has the task of introducing environmental study programs into the schools, a subject that

Inthor Preblec utilities Zoo angeles Industries Power " was thrust into the public eye by the ecology movement in the latter 1960's.

The coordinator for this ecology center is Mr. Grant Cary, who was kind enough to introduce me today.

Since the public as well as students had become interested in water and power as it affected their environment, the association with Mr. Cary and his group was natural.

It was this excellent cooperative effort that led Mr. Sitkoff to extend a flattering invitation to me to speak to you about how educators and industry can cooperate in providing worthwhile educational programs for the schools.

The implication, of course, is that we have found a magic formula for such cooperation, which is really not the case. If anything, this formula is nothing more than the creation of a common dialogue of interest, as I will outline further in this text.

Be that as it may, at the moment of invitation, I had a strong feeling that it was unscientific fate or coincidence that was placing me at this podium today and not Mr. Sitkoff.

For at that moment, I and several of my associates in the utility industry had been requested by the Edison Electric Institute to comment on informational material prepared by NSTA for teachers on the subject of energy--particularly energy as it applies to coal-fired power plants in the west.

To me this material was an example of a failure in cooperation and communication between educators and industry.

As background to this failure in cooperation, you should know that the Los Angeles Department of Water and Power currently has a small, but expanding interest in coal-fired plants. Unlike eastern communities, this is a new power source for us.

Other utilities in the southwestern states have varying interests in these plants, some of which are either still under construction or being planned.

I should also add, as a point of clarification, that we are being pressed to build such plants as the only viable means of generating electricity because other practical options, including the burning of oil or gas and the construction of nuclear plants are either being taken away from us or being made extremely difficult.

In the case of oil and gas, it is of course their high cost and a question of adequate supplies. The nuclear option has been endangered by vocal critics who are questioning their safety and alarming the public.

Returning to the NSTA material we were reviewing, I was personally dismayed at the number of inaccuracies and, possibly even more surprised, by the great amount of bias expressed in this material concerning coal as an energy source.

One example of this bias was a headline entitled "Shoot-out at Four Corners". This type of writing is hardly

commensurate with scientific expression and more appropriate to yellow journalism.

In brief, the article discussed the possible ramifications of these plants upon air quality and the Navajo and Hopi Indian cultures.

The major blame for construction of these plants and the alleged damage was attributed to the citizens of Los Angeles because of an implied unique thirst for energy.

Although we were able to provide some input on this material, and the most glaring inaccuracies have since been eliminated, the point I wish to make in mentioning this is that we in the utility industry have become hardened to the unsubstantiated charges of environmental extremists, but when such material emanates from educators, particularly in the field of science, it is cause for alarm.

This discovery was further evidence that there is an increasing polarization on the subject of energy that extends into every corner of our society, including the schools.

Somehow the issue of energy has become a political issue. Instead of uniting our nation in a common goal, the issue of energy is pitting Democrats against Republicans; consumer groups against the so-called industry establishment; and friends of the earth against alleged despoilers of the earth.

In this poisoned atmosphere, the American public is being urged to adopt a new "American Dream".

This dream involves the demand for instant solar energy, geothermal energy, fusion, tidal power, wind power, garbage power, and so on.

Many people are being led to believe that we can solve our serious energy problems overnight by virtue of our nation's past impressive technical successes.

No one denies that these developments will ultimately succeed, but the quantum leap demanded for some of these developments could be compared to a similar demand by the American people in 1903 for instant construction of a Boeing 747 following the Wright Brothers' success at Kitty Hawk.

This simplistic premise is being fostered by many well-meaning, but ill-informed leaders in the environmental and consumer movements, some of whom are gaining entry into the schools without challenge or balanced rebuttal.

Recently, on a Los Angeles college campus, one such leader added a new dimension to this simplistic approach by launching a blanket attack upon all industry for subverting the "free" energy of the sun in order to protect profits. His reference to solar energy as "people's energy" drew an ovation from the student audience.

Concerning this new wrinkle in energy rhetoric, I would like to make the observation that my employer is a publicly-owned municipal utility responsible to the electorate

through a Commission that is appointed by an elected mayor and city council.

We are also civil service employees. From this you may gather that we are in the "people's utility business", or about as close to it as one can get in a free society.

However, the difference between utility management and so-called "people leaders" is one of responsibility.

If we make a mistake, we cannot disappear into anonymity, but are held accountable to the public we serve.

Our decisions are subject, and rightfully so, to
the built-in checks and balances of the democratic process.

This assures the citizens of protection from possible heavyhanded policies and extreme positions on our part.

Unfortunately, the public is not assured of the same degree of formalized protection from vocal messiahs, who through widespread publicity and political lobbying, would pressure utilities into making moves that would place an excessive financial burden upon the public.

As a governmental agency, it would be irresponsible for us to fool the public. We know that someone must pay for any new development once initiated.

This brings up the point that people, who are ignorant of the possible consequences of their demands, but who believe that they are entitled to play major roles, usually give lip service to an alternate solution to a project they condemn.

However, when utilities pursue the alternative they suggest, you find that they or their close associates are just as vigorous in the condemnation of the alternative.

For example, those who opposed construction of new hydroelectric dams on the Colorado River 10 years ago, suggested that western utilities look to nuclear and coal-fired power plants instead.

Today, these same people oppose the alternatives they suggested, although utilities are committing millions of dollars for their development.

These messiahs have been capitalizing on the public's genuine concern for the environment and a latent, historic mistrust of industry and its motives.

I believe this mistrust has its roots in America's industrial revolution when multi-millionaire industrialists exploited labor to build their empires.

I also believe that the ecology hemorrhage of the late sixties and early seventies was an outgrowth of this same mistrust.

Whatever the origin, one incident involving the

Department of Water and Power during that environmental panic

comes to mind.

A member of my staff was invited to speak to a local high school ecology class. He had not stepped foot on a campus for quite some time.

Outside the classroom where he was to speak were several bulletin boards with clippings of industrial pollution from dumps, smokestacks, and chemical wastes.

He reported that his remarks to the class about the DWP's environmental efforts were greeted with disbelief and hostility from the students and teacher.

The focal point of this hostility was a large power plant in the San Fernando Valley which was accused of pouring smoke into the atmosphere.

One student was so angry about this that he suggested we close all of our power plants. He made the foolish statement that the public could live witout electricity.

When our representative explained that this and other power plants in the city were meeting stringent air pollution standards for emissions of gases and visible particulate material, and what they were probably seeing was harmless steam from cooling towers, neither the teacher nor the students would believe him.

When he challenged the class to tour the plant to see if he was telling the truth, they accepted.

Let me read to you the final outcome of this minor confrontation between industry and education as expressed by the teacher of that class in a follow-up letter. I quote:

"On behalf of my students and myself may I take this opportunity to thank you and your outstanding guides for a most informative day. 'Fear of the unknown' is a terrible fact of

life but somehow I feel that now, my students will be less
likely to criticize and more likely to see the variety of
viewpoints concerning power plants."

The favorable outcome of this event, and similar discussions with other students, convinced us that students were being graduated from our schools without the faintest notion how electricity is generated and what the utilities are doing to control pollution and improve their facilities aesthetically.

During this period we also began to realize that students had only a hazy knowledge about where their water supply came from. Because of widespread publicity about polluted water sources, many students also seemed to believe that their own drinking water was polluted, which is not the case.

For this sad information gap, I believe we, at the
Department of Water and Power, can accept a large part of the
blame for not attempting to work with the schools in the past.

We came to the conclusion that unless we became active with the educational community that the DWP could not long exist in an atmosphere of public hostility.

As I indicated to you earlier, the DWP is a utility that is dependent upon public support through its elected officials and periodic trips to the ballot box.

We felt that if the schools were to continue to turn out new generations of citizens antagonistic to the city's

attempts to provide water and electricity for the future, this would ultimately lead to a breakdown of both systems and poor service for the public.

You might say that we were frightened by this vision of citizen-utility confrontation, and we decided to work with the schools in an attempt to correct misconceptions similar to those I mentioned earlier.

Since the school system is so huge and our staff and budget small, we decided it best to concentrate our initial educational efforts in the high schools, in the area of social studies and science, both of which cross into environmental education.

With the cooperation of Mr. Grant Cary, and his staff at the Laurel Ecology Center, we have been providing extended tours of our facilities to educators teaching in these areas.

For the first time, teachers are not only learning first-hand where their water and electricity come from, but they are also learning about the problems that go along with such responsibility. They are also encouraged to ask what some may consider to be tough, embarrassing questions.

We have welcomed these guestions, and have provided honest answers in return.

I believe both Mr. Cary and Mr. Sitkoff will verify that these tours have been a valuable educational experience for the teachers, who in turn have been able to pass this

information on to their students.

Since the inception of these tours, we have received many letters praising this experience, with some admitting to varying degrees of prior prejudice.

In addition to tours, we have placed school librarians and the social studies and science department chairmen on a mailing list for informational materials on the subjects of water and energy.

This is not necessarily material we publish. Much of this material is from outside sources, and we may either duplicate or purchase this material in bulk and mail it direct.

In many cases we have either asked Mr. Cary or Mr. Sitkoff to evaluate this material before we commit ourselves.

In every case we try to provide material of educational quality, usually providing a penetrating analysis of a particular subject.

Obviously the teacher has the option to round-file this material if he desires.

From the response we have been getting from teachers and students, and from the comments from Mr. Cary's staff, there seem to be very few if any timely texts available in the schools discussing these urgent questions, and we are happy to be able to help fill the vacuum.

A third means of assistance has been the donation of films to the school's Audio-Visual Department.

Here again we look for informative material that does not necessarily provide an industry viewpoint. These are screened by Mr. Cary's group as well as screening committees selected by the school's A-V Department.

We are also attempting to cooperate with Mr. Cary's group in the preparation of inexpensive film strips on the subjects of water and power supply. Our photographic files have been opened to him, as well as our facilities for photographic purposes.

In addition to the foregoing, we have welcomed individual requests from teachers for speakers at every level of education.

If there is one regret, it is that we are unable to provide full attention to every grade level from kindergarten through college.

We are hoping that Mr. Cary's independent efforts in preparing lesson material for these various grade levels will allow us to contribute something.

Through all of these efforts, it is our sincere hope that future generations of Los Angeles citizens will be more knowledgeable on these subjects than their predecessors.

As for the question, "Is educator-industry cooperation possible?" I believe my comments have already supplied the answer.

This can be summed up as a need for assistance on both sides. I believe educational institutions need the support of the industrial segment of our society to lend balance to

theoretical views.

On the other hand, industry is willing to cooperate with the schools, and asks for nothing more in return than equity, or a fair hearing in the classroom.

If the educator is prepared to offer such equity, he will have laid the groundwork for an atmosphere of mutual trust and assistance.

This is the formula for success I mentioned earlier.

At this juncture in history, I do not believe that our nation can continue to afford the luxury of unsubstantiated attacks upon institutions that are the cornerstone of society.

The industrial revolution that spawned the exploiters of labor and the nation's natural resources has passed into history.

Industry's laissez faire complacency of the booming fifties and sixties is also history.

In their place we now have a new revolution—an energy revolution—testing whether democracy can survive in a world of depleting natural resources and a shifting balance of power favoring autocratic nations who still retain such wealth.

This is not a partisan issue.

This is a basic human survival issue in which we must all link hands.

Together, we must win the energy battle for our generation and the generations to come.

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